UI Bulletin #100c

Subject: Properly Maintaining Vehicles in Dealer Inventory
Models Affected: All GM Passenger Cars and Trucks
Model Years: 2011 and beyond
Date: July 7, 2014
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ADVISORY:

This bulletin has been revised to add information in the Diesel Engine Section

SVM/Dealer Inventories

Important: SVMs like GM Dealers are responsible for the storage and proper care of new vehicles held in dealer inventory until they are delivered to the customer. Extra care and attention to detail should be taken to make sure vehicles that have spent longer times in dealer inventory are properly delivered to the customer with no product issues (such as stall/no start issues due to improper battery maintenance or vehicle vibration due to tire flat spotting). Damage or deterioration, resulting from improper storage, is not to be covered by the New Vehicle Limited Warranty. For more information, refer to the Transportation, Vehicle Storage and PDI Policy Manual - Section 2.1 New Vehicle storage.

Most customers consider the condition of their vehicle at the time of delivery as a direct reflection of the dealership and potentially the amount of care and excellence the service department will deliver or not in the future. Therefore, providing the best vehicle possible at customer delivery can increase your CSI (Customer Satisfaction Index), and ultimately the number of customers in your showroom and service departments. In order to maintain a high level of quality, special attention should be paid to the proper maintenance and storage of your new vehicle inventories. The list below will assist you in keeping your vehicle inventory protected and ready for customer delivery.

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Battery Maintenance

12 Volt System

Maintain battery charge on vehicles in dealer inventory per the following:

1. At vehicle delivery to the dealership (PDI), test/charge the battery using the GR-8 Tool (EL-50313) in the *PDI mode*. This step allows the battery to be charged back up (topped off) at PDI (for 20 minutes or less) to make up for any loss of charge that occurred during the vehicle transit time from assembly plant to the dealer.
2. Every 30 days in dealer inventory, test/charge the battery using the GR-8 Tool (EL-50313) in the *PDI mode*. This step will allow the battery state of charge to be maintained, which maximize over all battery life. Vehicle batteries that are in dealer inventory for extended amounts of time without being maintained/charged will see a significant overall reduction in the battery's service life.
3. At point of sale (just prior to delivering the vehicle to the customer), test/charge the battery using the GR-8 Tool (EL-50313) in the *PDI mode*. This step will ensure that the battery is fully charged for the best customer satisfaction possible.
4. On vehicles with two Batteries, each battery must be electrically isolated and charged individually, which will result in two printouts.

   Note: Vehicles with Stop/Start Auxiliary batteries must be charged separately from the main battery during the period of dealer inventory storage. The Auxiliary battery is not connected in a manner that will allow both batteries to be charged at the same time and must be charged individually, which will result in two printouts.
5. Dealers should leave vehicles in Transport Mode while the vehicles are sitting on dealership lots to extend battery stand time. For additional information and details, please refer to the latest version of GM Bulletin Number 11-08-49-001: Transport Mode On Message Displayed in Driver Information Center (DIC) and/or Battery Light is Flashing for turning this feature off and on.

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High Voltage System – Hybrids (except Chevrolet Volt)

The conventional 12V battery used in hybrid vehicles requires maintenance in accordance with the '12 Volt System' above.

Maintenance is not required for the Hybrid high voltage battery while in dealer inventory.

High Voltage System – Chevrolet Volt

The conventional 12V battery used in the Chevrolet Volt requires maintenance in accordance with the '12 Volt System' above.

While routine maintenance is not required for the High Voltage battery, it is recommended to have the high voltage battery be charged less than 50% if it will sit for extended periods of time or while in dealer inventory.

Important: During PDI of the Chevrolet Volt, 'Final Inspection and Preparation' steps require the high voltage battery be fully charged using the on-board charger just prior to delivery.

A full charge will require approximately 12 to 14 hours using the 120V Portable Charge Cord or 4 hours using a 240V Stationary charger.

Tire Flat-Spotting

All tires, no matter the manufacturer, are susceptible to flat spotting if the vehicle sits on the dealership lot prior to customer delivery and is not moved or driven for an extended period of time. Flat spots on the tires can cause vibration concerns.

Vibration issues for flat spotting can develop between 30-45 days (depending on the tire design, parking surface and weather conditions) and usually will be gone after allowing the tires to heat up after few minutes of driving at highway speeds on smooth surface roads.

Vibration issues that develop from allowing the vehicle to sit without being moved/driven for between 45-90 days usually will be gone after allowing the tires to heat up after 10 minutes of driving at highway speeds on smooth surface roads.

To attempt to minimize this concern, the following is recommended:

- Tires should be inflated to 300 kPa (44 psi) for longer term storage in inventory. While higher tire pressures during storage has not been proven to eliminate this concern, under inflation has been shown to contribute to its severity, so higher pressure is preferred to lower pressure.

  Tip: *Tires on average lose 7 kPa (1 psi) every 30 days. Additionally there is a 7 kPa (1 psi) loss in pressure for each 6°C (10°F) drop in air temperature. Example: A tire with 300 kPa (44 psi) at 16°C (60°F) would have 240 kPa (35 psi) after 6 months in inventory at –1°C (30°F) air temperature.*

- Vehicles should be moved every 30 days. If vehicles are allowed to sit more than 30 days at a time, more noticeable or objectionable tire vibrations may be noted. Vibration issues that develop from allowing the vehicle to sit without being moved/driven for more than 90 days may become permanent and would require tire replacement to repair (which would not be considered a warrantable item)

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At the time of delivery, vehicle tire pressures MUST be reset to the values as outlined on the Tire Pressure Placard in order to provide the customer with the proper ride and handling characteristics designed into the vehicle.

Important: If any tire vibration is noted during the PDI process before measuring tires on equipment such as the Hunter GSP 9700, the vehicle MUST be driven a minimum of 24 km (15 mi) to ensure removal of any flat spotting (The tendency to "flat spot" is less likely as the tire accumulates mileage).

Tire Pressure Monitoring System (TPMS)

The TPMS is learned at the assembly plant and should not need to be re-learned at customer delivery unless wheels are replaced or rotated. Vehicles that have been in dealer inventory for extended amounts of time may have a TPMS light on indicating proper tire pressure (air inflation) is required. Properly adjusting all tire air pressures to the recommended levels and driving the vehicle will turn the light off (refer to the Tire and Loading Information label on the driver side door) - DO NOT re-learn the TPMS. For additional information refer to the latest version of Corporate Bulletin Number 09-03-16-002 - Dealership Service Consultant Procedure as Vehicle Comes into Service Drive for Tire Pressure Monitor (TPM) System Message, Light and Customer Information.

Brakes

Extended outside storage may increase the opportunity for brake noise issues. Vehicle braking systems tend to be self-cleaning while vehicles are in use, preventing any build-up of corrosion on the brake rotor surfaces. It is a good practice if a vehicle needs to be moved (such as to access other vehicles) to drive it once around the block and apply the brakes several times. This practice will not only eliminate the opportunity for rust to build up on the rotors, but may help to minimize flat spotting of tires.

Important: Vehicles should be moved and brakes applied every 30 days in order for this practice to remain effective.

At times more extensive corrosion can cause pulsation due to thickness variation. This usually happens when the vehicle is parked for long periods of time in humid type conditions and the braking surface area under the pads corrode at a different rate compared to the rest of the braking surface area. Cleaning up of braking surfaces (burnishing) can be accomplished by 10-15 moderate stops from 56-64 km/h (35-40 mph) with cooling time between stops.

Protective Shipping Materials

Many GM vehicles come with protective coverings, foam blocks and other preventative measures applied before vehicle shipping to aid in vehicles being delivered in the best possible condition.

The exterior protection foam block door and bumper protectors should be left in place up to the time of the customer delivery except for vehicles on prominent display such as the showroom floor. These protective devices help to minimize lot damage, reduce dealer expense and increase customer satisfaction.

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General Motors has commonized the use of door edge protection in order to reduce the chance of chips/scratches on the doors of new vehicles. The protectors come in the form of a black foam block that adheres to the painted door panel by a sheet of white, two-sided tape. This foam block is designed to protect not only the painted body panel, but also any body cladding or moldings on the vehicle. The location of the door protection varies, depending on the contours of the door or body cladding. The purpose of this protection is not only to protect the vehicle during transportation from the plant to the dealer, but also while the vehicle is either stored or displayed at the dealership. Refer to the General Motors Service Policy and Procedures Manual, Article 2.2 for more information and recommendations. GM recommends the door edge protection stay on the doors up until delivery to the customer. By leaving this protection in place, the possibility of door chips, scratches or dents is virtually eliminated.

Checking/Cleaning Windshield Wipers/Window Glass

Wiper Blades

Vehicle windshield wipers are exposed to weathering elements as soon as a vehicle is produced. During extended outdoor storage the wiper blades may not function as well due to the following factors:

- Dirt/debris/dried soap stuck on the blade surface
- Oxidation of the rubber blade
- The rubber blade may take a “permanent set” from non-use.

It is recommended that the wiper blades be cleaned with a lint free cloth or paper towel soaked with windshield washer fluid (GM Optikeen recommended) or a mild detergent. You should see significant amounts of dirt being removed on the cloth. Be sure to wash the windshield thoroughly when you clean the blades. Bugs, road grime, sap and a buildup of car wash/wax treatments may additionally cause wiper streaking.

Important: Avoid getting windshield washer fluid on your hands. Wear rubber gloves or avoid direct contact with washer fluid. NEVER use gasoline, kerosene, or petroleum based products to clean wiper blades.

Tip: DO NOT operate the wipers if the vehicle is extremely dirty with gritty or sandy materials, or twigs/sticks in the cowl area. This type of debris dragged by the force of the wipers while dry may cause glass scratching.

Window Glass

The interior surfaces of the window glass may appear hazy (due to surface deposits) after a vehicle has sat in a “closed-up” condition for an extended period of time. It is suggested that window washing during the PDI process be performed with plain water. Washing by this method increases the amount of time that the windows will stay clean, as cleaners generally leave a film that accelerates the deposition of new dirt.

ONLY if satisfactory results cannot be obtained (streaking), please use GM Vehicle Care Glass Cleaner (or equivalent) to clean heavier deposits.

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Fuel/Lubricants/Oil-Life Monitor

Caution: Do not allow vehicles to run out of fuel during idle conditions. Allowing a vehicle to run out of fuel while idling may cause damage to the fuel pump.

Gasoline Fuel

As vehicles age while in inventory the potential for fueling issues increases. *Gasoline powered* vehicles should not encounter any fuel related issues while being stored for up to one year. Vehicles should have fresh fuel added as needed or if in stock for over one year.

Lubricants and Oil Life Monitor

As vehicles are kept in stock for longer periods of time, questions may be raised not only by the new car prep personnel, but also by customers. Here are some suggestions as to proper business practices.

The *Oil Life Monitor* in new GM vehicles will count down as vehicles are started, moved and run for the purpose of battery charging. If vehicles remain in stock for longer periods, what guidelines should you follow to answer questions about the oil life monitor?

- When the vehicle was assembled the oil life monitor begins counting down the useful life of the oil. If the Oil Life percentage indicates below 90% of the oil life left before vehicle delivery and the vehicle is older than 7 months, it is advised that the oil be changed before delivery to the customer (An alternative would be to offer the customer a discount coupon good for a reduced cost oil change, to compensate for used up oil-life before delivery).

  Important: The Oil-Life Monitor should not be reset at the time of delivery unless the vehicle oil has been changed.

- If the Oil Life Monitor indicates above 90% or the vehicle build date is within 6 months or newer, the vehicle may be delivered without additional action. There is always some period of time that a vehicle is in dealer stock before it is delivered, and that small drop in oil life is expected.

  Important: If a vehicle remains in stock for 1 year or greater, you should change the vehicle engine oil.

Diesel Engine Special Care

Periodic Operation

Diesel powered vehicles should not be left stationary for more than 45 days. When the storage duration approaches 45 days, the vehicle should at least be started and idled until the engine reaches operating temperature. Ideally, the vehicle should be driven for at least 1.6 km (1 mi) and then idled to operating temperature to prevent turbocharger malfunction.

Fuel

Diesel powered vehicles should not have additional fuel added to the tank unless required. The assembly plant fuels vehicles with a special blend of ultra-low sulfur diesel extending its stability over marketplace diesel fuel. Fuel readily available in the consumer market may have high levels of

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Biodiesel and likewise shorter storage potential. If re-fueling is required, add only in 15 L (4 gallon) increments using winter blend fuels where appropriate.

Diesel Exhaust Fluid

Diesel Exhaust Fluid should be added at the time of Vehicle Pre-Delivery Inspection to ensure that the DEF is filled prior to delivery. Make certain the GM provided nozzle, including internal vent tube, is used to ensure proper feedback from the fill limit valve. *DO NOT OVERFILL THE TANK.* When the fluid first begins to overflow out of the fill neck, the tank is full.

Battery State of Charge

Wherever possible, diesel powered vehicles should have the batteries maintained with a battery charger as opposed to running the vehicle for 30 minutes to conserve the factory fueling.

Storage Lot Practices/Vehicle Washing

While all damage and every situation cannot be accounted for, simple thoughtfulness and care should be your guide. There are many opportunities for damage to the finish of vehicles. Please review the following good discussion starters with porters and technicians:

- Simple winter season conditions can be a good source of damage for northern dealers. Sharp snow shovels and ice scrapers can damage vehicles. Consider the use of plastic shovels (non-metal edged) for use in and around vehicle storage lots and make sure snow removal tools are in good condition. Instruct dealership personnel to be aware of potential damage when removing ice buildup from the vehicles.
- Keep bushes and shrubs trimmed back around vehicle storage lots. Sometimes, when space is at a premium, every inch of a lot is utilized. Do not park vehicles near landscaping that, during a thunderstorm or winter storm, may droop or move sufficiently to contact vehicles, causing finish damage.
- Regularly maintain your dealership car wash. Worn components or improperly working mechanisms and valves may damage or cause dulling of vehicle finishes. If your dealership hand washes and polishes vehicles for delivery, reconfirm that personnel are dressed in proper clothing devoid of belt buckles, metal buttons/snaps, wallet chains, etc.
- Vehicles on the front lot, visible by customers, should be kept clean and washed regularly for the sake of a nice dealership appearance. Vehicles in off-site storage, or secured areas should be kept clean preferably by touchless methods. Constant washing may create fine scratches or swirls in the paint on dark colored vehicles. Lightly power washing with soap will remove any harmful accumulations of dirt, bird droppings, acidic leaves, etc. without the risk of causing scratches.

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